

r_int_day_1_r_basic_sumstat

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r - base commands for Summary Statistics

```
# load r-bulit-in dataset
```

```
df <- iris
```

```
# datafile summary  
summary(df)
```

```
##   Sepal.Length   Sepal.Width   Petal.Length   Petal.Width  
##   Min.    :4.300   Min.    :2.000   Min.    :1.000   Min.    :0.100  
##   1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.300  
##   Median :5.800   Median :3.000   Median :4.350   Median :1.300  
##   Mean   :5.843   Mean   :3.057   Mean   :3.758   Mean   :1.199  
##   3rd Qu.:6.400   3rd Qu.:3.300   3rd Qu.:5.100   3rd Qu.:1.800  
##   Max.    :7.900   Max.    :4.400   Max.    :6.900   Max.    :2.500  
##           Species  
##   setosa    :50  
##   versicolor:50  
##   virginica :50  
##  
##  
##
```

```
# mean  
mean(df$Sepal.Length)
```

```
## [1] 5.843333
```

```
# SD
sd(df$Sepal.Length)
```

```
## [1] 0.8280661
```

```
# median
median(df$Sepal.Length)
```

```
## [1] 5.8
```

```
# percentile
quantile(df$Sepal.Width, 0.1)
```

```
## 10%
## 2.5
```

```
quantile(df$Petal.Length, c(0.1, 0.9))
```

```
## 10% 90%
## 1.4 5.8
```

```
quantile(df$Petal.Length, seq(0, 1, by = 0.1))
```

```
## 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
## 1.00 1.40 1.50 1.70 3.90 4.35 4.64 5.00 5.32 5.80 6.90
```

```
# quartile
quantile(df$Petal.Length, seq(0, 1, by = 0.25))
```

```
## 0% 25% 50% 75% 100%
## 1.00 1.60 4.35 5.10 6.90
```

```
# IQR
IQR(df$Petal.Width)
```

```
## [1] 1.5
```

```
quantile(df$Petal.Width, 0.75) - quantile(df$Petal.Width, 0.25)
```

```
## 75%
## 1.5
```

loading data files

```
# load csv
df <- read.csv("wnba.csv")

# excel file
library("readxl")

df_2 <- read_excel("wnba.xlsx", sheet = "wnba")
```

exercises

In a Science test, each correct answer was awarded 5 marks and 2 marks were deducted for each incorrect answer. If there were 20 questions in the test and Danny obtained 79 marks, how many questions did he answer correctly?